

New combinations in *Phellinus* s.l. and *Inonotus* s.l.

JULIANO M. BALTAZAR & TATIANA B. GIBERTONI

baltazarjm@ymail.com & tbgibertoni@hotmail.com

Universidade Federal de Pernambuco, Departamento de Micologia
Av. Nelson Chaves s/n, CEP 50670-420, Recife, Pernambuco, Brazil

Abstract — In order to update the nomenclature of some species of poroid *Hymenochaetaceae*, the following new combinations are proposed: *Fulvifomes melleoporus*, *F. membranaceus*, *F. merrillii*, *Fuscoporia chrysea*, and *Inonotus portoricensis*.

Key words — Agaricomycetes, Hymenochaetales, polypore, taxonomy

Phellinus Quél. has been widely used to accommodate poroid species of *Hymenochaetaceae* with dimitic hyphal system and usually perennial basidiomata. Species with similar macroscopic features but having annual basidiomata and monomitic hyphal system have been placed in *Inonotus* P. Karst. (Pegler 1964; Gilbertson 1976, 1979; Larsen & Cobb-Poule 1990; Ryvarden 1991, 2004, 2005). However, many authors who do not accept these genera in this sense have suggested splitting them into smaller and more natural genera as supported by morphological and molecular evidence (Fiasson & Niemelä 1984; Niemelä et al. 2001; Wagner & Fischer 2001, 2002; Fischer & Binder 2004; Ghobad-Nejhad & Dai 2007).

Many species from the American continent have not been included in previous taxonomic and phylogenetic studies of *Phellinus* s.l. and *Inonotus* s.l. We propose the following new combinations in order to update the nomenclature of some of these species (for descriptions, see Fidalgo 1968, Wright & Blumenfeld 1984, and Ryvarden 2004):

Fulvifomes melleoporus (Murrill) Baltazar & Gibertoni, **comb. nov.**

MYCOBANK MB 515285

Basionym — *Fomitiporella melleopora* Murrill, N. Amer. Fl. 9(1): 13 (1907).

Known distribution — Neotropical species, known from Brazil, southern USA, and Venezuela (Larsen & Cobb-Poule 1990, Baltazar & Gibertoni 2009).

***Fulvifomes membranaceus* (J.E. Wright & Blumenf.) Baltazar & Gibertoni, comb. nov.**

MYCOBANK MB 515286

BASIONYM — *Phellinus membranaceus* J.E. Wright & Blumenf., Mycotaxon 21: 422 (1984).

KNOWN DISTRIBUTION — Neotropical species, known from northeastern Argentina, northeastern Brazil, Costa Rica, and Panama (Wright & Blumenfeld 1984, Ryvarden 2004, Baltazar & Gibertoni 2009).

***Fulvifomes merrillii* (Murrill) Baltazar & Gibertoni, comb. nov.**

MYCOBANK MB 515287

BASIONYM — *Pyropolyporus merrillii* Murrill, Bull. Torrey Bot. Club 34: 479 (1907).

KNOWN DISTRIBUTION — Probably pantropical but rare, known from northwestern Argentina, Brazil, China, Costa Rica, Nepal, southeastern USA, and Philippines (Larsen & Cobb-Poule 1990, Dai 1999, Ryvarden 2004, Robledo & Rajchenberg 2007, Baltazar & Gibertoni 2009).

COMMENTS — *Fulvifomes* Murrill is characterized by perennial basidiomata, lack of setae, and yellowish, thick-walled, ellipsoid basidiospores (Wagner & Fischer 2002). Pileate species usually have a rimose pileus, such as found in the *F. rimosus* complex. Resupinate species such as *F. melleoporus* and *F. membranaceus* are reminiscent of *Fomitiporella* Murrill, which has, however, brown basidiospores. The resupinate species of these two genera are separated mainly by basidiospore color, which is constant within each species.

***Fuscoporia chrysea* (Lév.) Baltazar & Gibertoni, comb. nov.**

MYCOBANK MB 515288

BASIONYM — *Polyporus chryseus* Lév., Ann. Sci. Nat., Bot., sér. 3 5: 301 (1846).

KNOWN DISTRIBUTION — Neotropical, known from Belize, Colombia, Costa Rica, Jamaica, and Venezuela (Ryvarden 2004).

COMMENTS — Species of *Fuscoporia* Murrill have hymenial setae, incrustated generative hyphae in the dissepiments, and usually hyaline, thin-walled basidiospores. Basidiomata are annual to perennial with monomitic to dimitic hyphal system (Niemelä et al. 2001, Wagner & Fischer 2002).

***Inonotus portoricensis* (Overh.) Baltazar & Gibertoni, comb. nov.**

MYCOBANK MB 515289

BASIONYM — *Fomes portoricensis* Overh., in Seaver & Chardón, Sci. Surv. Porto Rico & Virgin Islands 8(1): 158 (1926).

KNOWN DISTRIBUTION — Neotropical, known from Brazil, Costa Rica, Cuba, Mexico, Panama, and Puerto Rico (Fidalgo 1968). Lowe (1957) reports a specimen from Java that Fidalgo (1968) regards to be *Inonotus pachyphloeus* (Pat.) T. Wagner & M. Fisch.

COMMENTS — *Inonotus* s. str. accommodates species with hyphal system similar to that of *Fuscoporia*; however the former lacks incrustated generative

hyphae and has pigmented basidiospores and usually setal hyphae (Wagner & Fischer 2002).

Acknowledgments

Many thanks are due Dr. Yu-Cheng Dai (China) and Dr. Aristóteles Góes Neto (Brazil) for critically reviewing the manuscript. The 'Conselho Nacional de Desenvolvimento Científico e Tecnológico' (CNPq) provided a master scholarship for the senior author.

Literature cited

- Baltazar JM, Gibertoni TB. 2009. A checklist of the aphyllophoroid fungi (*Basidiomycota*) recorded from the Brazilian Atlantic Forest. *Mycotaxon* 109: 439–442.
- Dai YC. 1999. *Phellinus* sensu lato (*Aphyllophorales*, *Hymenochaetaceae*) in East Asia. *Acta Bot. Fenn.* 166: 1–115.
- Fiasson JL, Niemelä T. 1984. The *Hymenochaetales*: a revision of the European poroid taxa. *Karstenia* 24: 14–28.
- Fidalgo O. 1968. *Phellinus pachyphloeus* and its allies. *Mem. New York Bot. Gard.* 17(2): 109–147.
- Fischer M, Binder M. 2004. Species recognition, geographic distribution and host-pathogen relationships: a case study in a group of lignicolous basidiomycetes, *Phellinus* s.l. *Mycologia* 96(4): 799–811.
- Ghobad-Nejhad M, Dai YC. 2007. The genus *Phellinus* s.l. (*Basidiomycota*) in Iran. *Mycotaxon* 101: 201–222.
- Gilbertson RL. 1976. The genus *Inonotus* (*Aphyllophorales*: *Hymenochaetaceae*) in Arizona. *Mem. New York Bot. Gard.* 28(1): 67–85.
- Gilbertson RL. 1979. The genus *Phellinus* (*Aphyllophorales*: *Hymenochaetaceae*) in western North America. *Mycotaxon* 9(1): 51–89.
- Larsen MJ, Cobb-Pouille LA. 1990. *Phellinus* (*Hymenochaetaceae*) A survey of the world taxa. *Syn. Fungorum* 3. 1–206.
- Lowe JL. 1957. *Polyporaceae* of North America. The genus *Fomes*. N. Y. State Univ. Coll. For. Tech. Publ. 80: 1–97.
- Niemelä T, Wagner T, Fischer M, Dai YC. 2001. *Phellopilus* gen. nov. and its affinities within *Phellinus* s. lato and *Inonotus* s. lato (*Basidiomycetes*). *Ann. Bot. Fennici* 38: 51–62.
- Pegler DN. 1964. A survey of the genus *Inonotus* (*Polyporaceae*). *Trans. Brit. Mycol. Soc.* 47(2): 175–195.
- Robledo GL, Rajchenberg M. 2007. South American polypores: first annotated checklist from Argentinean Yungas. *Mycotaxon* 100: 5–9.
- Ryvarden L. 1991. Genera of polypores, nomenclature and taxonomy. *Syn. Fungorum* 5: 1–363.
- Ryvarden L. 2004. Neotropical Polypores Part 1. Introduction, *Ganodermataceae* & *Hymenochaetaceae*. *Syn Fungorum* 19: 1–229.
- Ryvarden, L. 2005. The genus *Inonotus* a synopsis. *Syn. Fungorum* 21: 1–149.
- Wagner T, Fischer M. 2001. Natural groups and a revised system for the European poroid *Hymenochaetales* (*Basidiomycota*) supported by nLSU rDNA sequence data. *Mycol. Res.* 105: 773–782.
- Wagner T, Fischer M. 2002. Proceedings towards a natural classification of the worldwide taxa *Phellinus* s. l. and *Inonotus* s. l., and phylogenetic relationships of allied genera. *Mycologia* 94(6): 998–1016.

Wright JE, Blumenfeld SN. 1984. New South American species of *Phellinus* (*Hymenochaetaceae*).
Mycotaxon 21: 413–425.